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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/807,224

03/23/2004

Marc R. Cossement

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06/14/2006

OWENS CORNING  
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EXAMINER

RUDDOCK, ULA CORINNA

ART UNIT

PAPER NUMBER

1771

DATE MAILED: 06/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/807,224	<b>Applicant(s)</b> COSSEMENT ET AL.	
	<b>Examiner</b> Ula C. Ruddock	<b>Art Unit</b> 1771	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on 22 May 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5,7 and 21-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 21-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. The Examiner has carefully considered Applicant's response filed May 22, 2006. In view of Applicant's statement that O'Brien-Bernini et al. (US 2004/0122166) is not available as prior art, the rejection has been withdrawn. However, after an updated search, additional prior art has been found which renders the invention as currently claimed unpatentable for reasons herein below.

#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-5, 21, 23, 24, 26, 27, and 28 rejected under 35 U.S.C. 102(e) as being anticipated by Rodrigues et al. (US 2004/0254285). Rodrigues et al. disclose a fiberglass nonwoven binder (abstract). The binder comprises a carboxylic acid monomer such as acrylic acid, methacrylic acid, crotonic acid, and isocrotonic acid [0019], which the Examiner is equating to Applicant's polycarboxy polymer. Rodrigues et al. also disclose that is well known to use a crosslinking agent, such as triethanolamine, in binder systems [0008]. The binder further comprises compounds that are capable of forming hydrogen-bonding complexes with the carboxyl polymer which allows for crosslinking at lower temperatures [0034], such as polysaccharides, specifically, maltodextrins [0038]. The hydrogen-bonding complex to polymer binder weight ratio is from about 1:99 to about

99:1, which meets Applicant's requirement that the co-binder is present in an amount of at least 50% and the co-binder is present in an amount of at least about 75%. The binder further comprises a catalyst in an amount of 0-25% by weight [0041]. The catalysts can comprise alkali metal salts of a phosphorus-containing organic acid or fluoroborates [0041].

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 7 and 22 rejected under 35 U.S.C. 103(a) as being unpatentable over Rodrigues et al. (US 2004/0254285), as shown above. Rodrigues et al. disclose the claimed invention except for the specific teaching that the dextrin is borax modified and that a molar ratio of the carboxylic acid groups to said hydroxyl groups is from 1:3 to 5:1.

It would have been obvious to one having ordinary skill at the time the invention was made to have modified the dextrin of Rodrigues et al. with borax, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. In the present invention, one would have used borax-modified dextrin motivated by the desire to increase the fire resistance of the binder composition.

Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the molar ratio of the carboxylic acid groups to said hydroxyl

groups be from 1:3 to 5:1, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. In the present invention, one would have optimized the molar ratio of the carboxylic acid groups to the hydroxyl groups motivated by the desire to lower the curing temperature.

6. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rodrigues et al. (US 2004/0254285) in view of Floyd et al. (US 5,026,746). Floyd et al. disclose starch based binder composition for non-woven fibers or fabrics made of fiberglass (col 2, ln 12-14). The starch used in the composition can be a maltodextrin (col 3, ln 5) and the monomers include acrylic acid (col 4, ln 21). The ratio of monomer to starch may be varied from about 1:50 to about 15:1, preferably from about 1:1 and to about 7:1 (col 4, ln 24-26). Preferred dextrans include white dextrans, canary dextrans, and British gums (col 3, ln 49-50). A cross-linking agent (col 6, ln 27) and a catalyst (col 5, ln 13-15) is also present in the composition. The catalyst amount ranges from about 0.1-10% by weight of the monomer.

It would have been obvious to have used Floyd's disclosure of the Applicant's preferred dextrans (i.e. white dextrans, canary dextrans, and British gums) as the dextrans in Rodrigues et al., motivated by the desire to create a binder composition with improved recovery.

### ***Response to Arguments***

7. Applicant's arguments with respect to claims 1-5, 7, and 21-28 have been considered but are moot in view of the new ground(s) of rejection.


***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ula C. Ruddock whose telephone number is 571-272-1481. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H. Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

UCR

  
**Ula C. Ruddock**  
Primary Examiner  
Tech Center 1700